# Common Assumptions Effort

## - Update –

November 7, 2002

Presentation to:

BDPAC

Water Supply Subcommittee

# Presentation Overview

- Context for Common Assumptions baseline development
- Demand management quantities
- Conjunctive use characterization approach
- Water transfers characterization approach

# Purpose for Common Assumptions

Why . . .

- ⇨ Develop consistency among individual projects
- ⇨ Improve efficiency of completing studies
- ⇨ Assist with Section 404 and ESA issues

How . . .

- ⇨ Develop baselines for comparative analysis
- ⇨ Baselines allow projects to assess:
  - Feasibility given fixed levels of “soft-path” actions
  - The change in benefits to beneficiaries

# Again!

Baselines allow projects to assess:

- Feasibility given fixed levels of “soft-path” actions
- The change in benefits to beneficiaries

# Baseline Development

Look at various analysis tools used by water supply investigations

- CALSIM, LCPSim, CalAg, DSM 2, MWD's IRP, others

Ask question:

"What is the implication of assumed levels of soft-path actions on inputs to these tools?"

# Approach

Step 1 – Craft framework for comparative analysis

Step 2 – Estimate future soft-path quantities

- ⇨ Future No Action (2030)
  - – Conditions and actions (both changes in demand and supply) that are reasonably foreseeable
  - – Modest trends
  - – Correlate with Water Plan Update “scenarios”
- ⇨ Alternative Future (2030)
  - – Includes demand reduction as well as assumed levels of conjunctive use and transfers consistent with and supported by CALFED
  - – Aggressive trends

Step 3 - Determine implication of quantities on analysis tool inputs and adjust where necessary

# Demand Management Quantification

- Use existing data sources
  - ⇨ Extrapolate to 2030 where appropriate
  - ⇨ Revising recycling values for Future No Action level to correlate with Water Plan Update quantification approach
- Continued communications between 3 efforts
  - ⇨ CALFED WUE, Water Plan Update and Common Assumptions
  - ⇨ Allow values to be revisited based on outcome of these other efforts

# Common Assumption Regions

# Example Regional Table

| | Future No Action Baseline (at 2030) Annual Benefit [1] | | | | | Alternative Future Baseline (at 2030) Annual Benefit [1] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Wet | A. Normal | B. Normal | Dry | Critical | Wet | A. Normal | B. Normal | Dry | Critical |
| | (Values rounded to the nearest 5,000 af) | | | | | (Values rounded to the nearest 5,000 af) | | | | |
| **Demand Reduction** | | | | | | | | | | |
| Ag Conservation | | | | | | | | | | |
| *Recoverable loss reduction* [2] | | | | | | | | | | |
| *Irrecoverable loss reduction* [3] | | | | | | | | | | |
| *Non-productive ET reduction* [4] | | | | | | | | | | |
| Urban Conservation | | | | | | | | | | |
| *Recoverable loss reduction* [2] | | | | | | | | | | |
| *Irrecoverable loss reduction* [3] | | | | | | | | | | |
| Land Fallowing [8] | | | | | | | | | | |
| **Supply Augmentation** | | | | | | | | | | |
| Recycling [5] | | | | | | | | | | |
| Transfers [6] | | | | | | | | | | |
| *into region* | | | | | | | | | | |
| *out of region* | | | | | | | | | | |
| *within region* | | | | | | | | | | |
| Desalination [7] | | | | | | | | | | |

# Statewide Totals
(1,000 acre-feet)

| | No Action (2030) | Alt.Future (2030) |
|---|---|---|
| Ag Conservation | 195 | 815 |
| Urban Conservation | 1,080 | 2,080 |
| Recycling (coastal regions only) | 460 | 1,075 |
| Desalination (coastal regions only) | 50 | 125 |
| Land Fallowing (Westlands WD only) | 15 | 230 |

# Ag Conservation

| | 2030 Future No Action Condition | | | | 2030 Alternative Future Condition | | | |
|---|---|---|---|---|---|---|---|---|
| | Recoverable Losses | Irrecoverable Losses | Non-Productive ET Losses | Total | Recoverable Losses | Irrecoverable Losses | Non-Productive ET Losses | Total |
| | (Values rounded to nearest 5,000 af) | | | | (Values rounded to nearest 5,000 af) | | | |
| Sacramento | 60 | 10 | 10 | 80 | 240 | 30 | 35 | 305 |
| Delta | 25 | 0 | 0 | 25 | 100 | 0 | 5 | 105 |
| West San Joaquin North | n/a | 0 | 0 | 0 | n/a | 10 | 10 | 20 |
| West San Joaquin South | 0 | 5 | 0 | 5 | 0 | 25 | 10 | 35 |
| East San Joaquin | 30 | 0 | 10 | 40 | 125 | 5 | 40 | 170 |
| Tulare Basin | n/a | 25 | 15 | 40 | n/a | 95 | 60 | 155 |
| SF Bay | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| Central Coast | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| South Coast | 0 | 5 | 0 | 5 | 0 | 20 | 0 | 20 |
| Total | 115 | 45 | 35 | 195 | 465 | 190 | 160 | 815 |

# Urban Conservation

| | 2030 No Action Condition | | | 2030 Alternative Future Condition | | |
|---|---|---|---|---|---|---|
| | Recoverable Losses | Irrecoverable Losses | Total | Recoverable Losses | Irrecoverable Losses | Total |
| | (Values rounded to nearest 5,000 af) | | | (Values rounded to nearest 5,000 af) | | |
| Sacramento | 80 | 0 | 80 | 270 | 15 | 285 |
| Delta | 5 | 0 | 5 | 5 | 0 | 5 |
| West San Joaquin North | 0 | 0 | 0 | 0 | 0 | 0 |
| West San Joaquin South | 0 | 0 | 0 | 0 | 0 | 0 |
| East San Joaquin | 25 | 0 | 25 | 220 | 10 | 230 |
| Tulare Basin | 40 | 15 | 55 | 125 | 50 | 175 |
| SF Bay | 20 | 185 | 205 | 25 | 225 | 250 |
| Central Coast | 0 | 55 | 55 | 0 | 80 | 80 |
| South Coast | 130 | 525 | 655 | 210 | 845 | 1,055 |
| Total | 300 | 780 | 1,080 | 855 | 1,225 | 2,080 |

# Others

- Recycling
  *(only estimated for coastal regions)*

| | No Action | Alt. Future |
|---|---|---|
| South Coast | 365 | 850 |
| Central Coast | 40 | 75 |
| Bay Area | 55 | 150 |

- Desalination
  *(only estimated for coastal regions)*

| | No Action | Alt. Future |
|---|---|---|
| South Coast | 50 | 125 |

- Land Retirement

| | No Action | Alt. Future |
|---|---|---|
| W. SJV South | 15<br>or 55?? | 55<br>or 245?? |

# Conjunctive Use Characterization

Approach:

- ⇨ Inventory all potential conjunctive use projects
- ⇨ Develop screening criteria to eliminate some projects and place others into Future No Action or Alternative Future baselines
- ⇨ Craft approach for analysis and modeling of assumed baseline projects
  - How are projects reflected in CALSIM?
    - change to inputs(hydrology/demands) or operations?

# Conjunctive Use Characterization (cont.)

## Data Sources for Inventory:

- Prop 13 grant applications to DWR
- MWD grant applicants (seeking share of their Prop 13 funds)
- AB303 grant applications
- ISI partners (and their stakeholders)
- WEF survey (available late Nov?)
- USGS
- DWR Water Plan Update efforts
- NHI conjunctive use study

**Other Sources??**

# Water Transfer Characterization

Approach:

- Define upper boundaries of potential transfer supplies by region
- Determine existing pumping priorities – extrapolate future conditions
- Craft approach to determine demand for transfers in correlation to willingness-to-pay

# Water Transfer Characterization (cont.)

Policy Issues:

- How might pumping priorities change in the future if, for instance, EWA supplies were provided by a new storage project rather than through short-term transfer arrangements?
- Supplies currently made available for out-of-region transfers might not be available in the future because of local demand increases. How should such shifts be reflected in future quantities?
- Should discussions of potential future transfers be reflected in the Alternative Future condition?

# Summary

- Soft-path actions are important element of water supply evaluations
- We want your comments

Contacts:


- Sean Sou, DWR 916-651-9269
  sou@water.ca.gov
- Greg Young, SKS 916-329-9199
  gyoung4@slb.com
- Noel Williams, CH2M Hill 916-920-0300
  nwilliam@ch2m.com

# Draft Schedule